

SUMMARY OF FINDINGS BOTANICAL STUDIES

Following is a short description of the vegetation on the Ka'au Crater and Maunawili Valley sites. The scientific names used in the discussion are in accordance with the most recent taxonomic treatment of the Hawaiian flora by Wagner et al. (1990).

Ka'au Crater

A reconnaissance survey of the Ka'au Crater site was made on 03 October 1993. Transportation to and from the site was provided by helicopter.

The vegetation on the more or less level crater floor is composed of three major vegetation associations. A low, wet meadow composed of the native sawgrass (Cladium jamaicensis), honohono (Commelina diffusa), and great bulrush (Shoenoplectus lacustris) covers most of the crater floor. On the southwestern half of the crater is a low, open scrub composed of 'ohi'a (Metrosideros polymorpha), strawberry guava (Psidium cattleianum), and hame (Antidesma platyphyllum). A tall, dense thicket of strawberry guava is found on the northeastern edge of the crater. The plants form an almost complete cover over the crater floor with only a few, small pockets of open water scattered here and there. The wetlands within the crater have been described in more detail by Elliott and Hall (1977).

On the lower slopes of the crater, where the proposed inlet/outlet structure would be sited, the vegetation consists primarily of guava (Psidium guajava) thickets, dense clumps of ti (Cordyline fruticosa), and scattered patches of banana (Musa X paradisiaca).

The upper slopes and crest of the Ko'olau Mountain range are dominated by a native plant community. Low, windswept 'ohi'a and 'ohi'a ha (Syzygium sandwicensis), 3 to 7 ft. tall, are the most abundant trees. Common to occasional are other natives such as Dubautia, 'akia (Wikstroemia oahuensis), Hedyotis, at least three species of Pelea, uki sedge (Machaerina mariscoides), etc. The introduced, noxious Coster's curse (Clidemia hirta) is also common in the area. The proposed project is not expected to directly impact these areas dominated by native plants, some of which may be considered rare and/or vulnerable.

Maunawili Valley

A reconnaissance survey of this site was made on 10 October 1993. Access was by means of the unpaved roads which service the banana farms in the back of the valley.

Vegetation on the proposed reservoir site consists of actively cultivated banana fields on the slopes and a mixed introduced forest within the gulches that cross the project site. The introduced plants include ironwood (Casuarina equisetifolia), silk oak (Grevillea robusta), rose apple (Syzygium jambos), guava, etc.

A native plant community composed primarily of koa (Acacia koa) and the matted uluhe fern (Dicranopteris linearis) occurs on the steeper slopes behind the proposed reservoir.

References

- Elliott, M.E. and E.M. Hall. 1977. Wetlands and wetland vegetation of Hawaii. Prepared for the U.S. Army Corps of Engineers, Pacific Ocean Division, Ft. Shafter. Contract # DACW-84-77-C-0014.
- Wagner, W.L., D.R. Herbst, and S.H. Sohmer. 1990. Manual of the flowering plants of Hawai'i. 2 vols. University of Hawai'i Press and the B.P. Bishop Museum Press, Honolulu. B.P. Bishop Museum Special Publication 83.